THE JOURNAL OF HYGIENE

EDITED BY

J. R. PATTISON

M. J. LEWIS C. R. MADELEY W. C. NOBLE

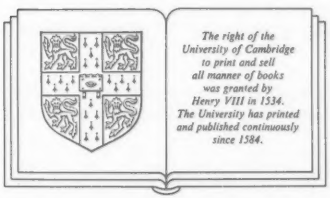
P. MORGAN-CAPNER

(ASSISTANT EDITOR)

IN CONJUNCTION WITH

M. J. ANDERSON
P. S. BRACHMAN
S. M. FEINSTONE
ANNA HAMBRAEUS
D. H. LLOYD
J. H. McCOY
J. NAGINGTON
R. F. SELLERS
C. C. SPICER
R. VAN DER WAAIJ
A. T. WILLIS
R. D. BARRY
A. B. CHRISTIE
R. J. GILBERT
O. M. LIDWELL
R. R. MARPLES
P. P. MORTIMER
J. S. OXFORD
M. B. SKIRROW
R. S. TEDDER
H. WILLIAMS-SMITH
SIR GRAHAM WILSON

VOLUME 94, 1985



CAMBRIDGE UNIVERSITY PRESS
CAMBRIDGE
LONDON NEW YORK NEW ROCHELLE
MELBOURNE SYDNEY

Published by the Press Syndicate of the University of Cambridge
The Pitt Building, Trumpington Street, Cambridge CB2 1RP
32 East 57th Street, New York, NY 10022, USA
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

© Cambridge University Press 1985

Printed in Great Britain by the University Press, Cambridge

Contents

No. 1 (February 1985)

PAGE

Special Article: Oxford, J. S. Biochemical techniques for the genetic and phenotypic analysis of viruses: 'Molecular Epidemiology' 1

Grange, J. M., Yates, M. D. and Collins, C. H. Subdivision of *Mycobacterium tuberculosis* for epidemiological purposes: a seven year study of the 'Classical' and 'Asian' types of the human tubercle bacillus in South-East England. 9

Melconian, A. K., Fleurette, J. and Brun, Y. Studies on staphylococci from toxic shock syndrome in France, 1981–1983 23

Roberts, D. Microbiological aspects of goat's milk. A Public Health Laboratory Service survey 31

Newell, D. G., McBride, H., Saunders, F., Dehele, Y. and Pearson, A. D. The virulence of clinical and environmental isolates of *Campylobacter jejuni*. . . . 45

Ho, B. S. W. and Wong, W. T. A one-year survey of campylobacter enteritis and other forms of bacterial diarrhoea in Hong Kong 55

Reid, H. F. M., Bassett, D. C. J., Poon-King, T., Zabriskie, J. B. and Read, S. E. Group G streptococci in healthy school-children and in patients with glomerulonephritis in Trinidad 61

Watson, G. N. The assessment and application of a bacteriocin typing scheme for *Clostridium perfringens* 69

Gill, O. N., Coghlan, J. D. and Calder, I. M. The risk of leptospirosis in United Kingdom fish farm workers. Results from a 1981 serological survey . . . 81

Jennings, R., Smith, T. L., Mellersh, A. R., Clark, A., Spencer, R. C. and Potter, C. W. Antibody response and persistence in volunteers following immunization with varying dosages of a trivalent surface antigen influenza virus vaccine . . . 87

Beyer, W. E. P. and Masurel, N. Antigenic heterogeneity among influenza A(H3N2) field isolates during an outbreak in 1982/83, estimated by methods of numerical taxonomy 97

Traavik, T., Mehl, R. and Wiger, R. Mosquito-borne arboviruses in Norway: further isolations and detection of antibodies to California encephalitis viruses in human, sheep and wildlife sera 111

Sommer, A. I., Traavik, T., Mehl, R., Berdal, B. P. and Dalrymple, J. M. Reservoir animals for nephropathia epidemica in Norway: indications of a major role for the bank vole (*C. glareolus*) in comparison with the woodmouse (*A. sylvaticus*) . . 123

Umoh, J. U., Ezeokoli, C. D. and Okoh, A. E. J. Immunofluorescent staining of trypsinized formalin-fixed brain smears for rabies antigen: results compared with those obtained by standard methods for 221 suspect animal cases in Nigeria . 129

No. 2 (April 1985)

PAGE

Special Article: Collins, C. H., Grange, J. M., Noble, W. C. and Yates, M. D. *Mycobacterium marinum* infections in man 135

Johnston, I. D. A., Anderson, H. R. and Lambert, H. P. The severity of whooping cough in hospitalized children – is it declining? 151

Frost, J. A., Willshaw, G. A., Barclay, E. A., Rowe, B., Lemmens, P. and Vandepitte, J. Plasmid characterization of drug-resistant *Shigella dysenteriae* 1 from an epidemic in Central Africa 163

Kirchhoff, L. V., McClelland, K. E., Do Carmo Pinho, M., Galba Araujo, J. Auxiliadora de Sousa, M. and Guerrant, R. L. Feasibility and efficacy of in-home water chlorination in rural North-eastern Brazil 173

Gross, R. J., Rowe, B. and Threlfall, E. J. *Escherichia coli* 0142.H6; a drug-resistant enteropathogenic clone?. 181

Fleisher, J. M. Implications of coliform variability in the assessment of the sanitary quality of recreational waters. 193

Martín-Bourgon, C., Berrón, S. and Casal, J. Hospital infection caused by non-typable *Staphylococcus aureus*: application of reverse typing 201

Hutchinson, D. N., Bolton, F. J. Hinchliffe, P. M., Dawkins, H. C., Horsley, S. D., Jessop, E. G., Robertshaw, P. A. and Counter, D. E. Evidence of udder excretion of *Campylobacter jejuni* as the cause of milk-borne campylobacter outbreak 205

Wreghitt, T. G. and Sillis, M. A μ-capture ELISA for detecting *Mycoplasma pneumoniae* IgM; comparison with indirect immunofluorescence and indirect ELISA 217

Pemberton, R. M., Jennings, R. and Smith, T. L. Morphology and antigenicity studies on reassortant influenza (H3N2) viruses for use in inactivated vaccines . . 229

Davies, F. G., Koros, J. and Mbugua, H. Rift Valley Fever in Kenya: the presence of antibody to the virus in camels (*Camelus dromedarius*) 241

No. 3 (June 1985)

Easter, M. C. and Gibson, D. M. Rapid and automated detection of salmonella by electrical measurements. 245

Marshall, R. B., Winter, P. J., Robinson, A. J. and Bettelheim, K. A. A study of enterotoxigenic *Escherichia coli*, serogroup 0126, by bacterial restriction endonuclease DNA analysis (BRENDA) 263

Stiles, M. E. and Sheena, A. Z. Efficacy of low-concentration iodophors for germicidal hand washing 269

Saez-Nieto, J. A., Dominguez, J. R., Monton, J. L., Cristobal, P., Fenoll, A., Vazquez, J., Casal, J. and Taracena, B. Carriage of *Neisseria meningitides* and *Neisseria lactamica* in a school population during an epidemic period in Spain . 279

Smith, M. G. The generation time, lag time, and minimum temperature of growth of coliform organisms on meat, and the implications for codes of practice in abattoirs 289

Linklater, K. A., Graham, M. M. and Sharp, J. C. M. Salmonellae in sewage sludge and abattoir effluent in South-east Scotland 301

PAGE

ROTIMI, V. O., OLOWE, S. A. and AHMED, I. The development of bacterial flora of premature neonates 309

GREENWOOD, M. H., COETZEE, E. F. C., FORD, B. M., GILL, P., HOOPER, W. L., MATTHEWS, S. C. W. and PATRICK, S. The microbiology of cooked prawns and shrimps on retail sale 319

CHOPRA, GIRISH and PARSHAD, V. R. Evaluation of coumatetralyl against two predominant murid species 327

SPELMAN, D. W. and MCHARDY, C. J. Concurrent outbreaks of influenza A and influenza B 331

PYHÄLÄ, R., KLEEMOLA, M. and VISAKORPI, R. The HI test modified by ether treatment in the sero-epidemiological surveillance of influenza B 341

ÅNESTAD, G. Surveillance of respiratory viral infections by rapid immunofluorescence diagnosis, with emphasis on the epidemiological development of respiratory syncytial virus infections 349

HOMAN, E. J., LORBACHER DE RUIZ, H., DONATO, A. P., TAYLOR, W. P. and YUILL, T. M. A preliminary survey of the epidemiology of bluetongue in Costa Rica and Northern Colombia 357

ANDERSON, R. M. and MAY, R. M. Age-related changes in the rate of disease transmission: implications for the design of vaccination programmes 365